

LISTING OF THE CLAIMS:

This listing of the claims replaces all prior versions, and listings, of claims in the application. Please amend claims 6 and 8.

1 1. (previously presented) A system for indicating the location of an energy
2 zone on an object surface, with the energy zone being an area on the object surface that is
3 imaged onto an IR detector by the IR optical system included in a non-contact IR thermal
4 measurement device, said system comprising:

5 a video sub-system for displaying a displayed image of at least a part of the
6 object surface not included in the energy zone and of at least a part of the object surface
7 included in the energy zone;

8 a range-finding sub-system for measuring the distance between the non-
9 contact IR thermal measurement device and the object surface and outputting a distance
10 signal indicating a measured distance; and

11 an optical overlay sub-system, coupled to the range-finding sub-system, for
12 overlaying a shape outline, having a dimension determined by a received measured distance,
13 over the displayed image of the object surface and with the shape outline indicating the extent
14 of a displayed image included in the energy zone.

1 2. (original) The system of claim 1 where the range-finding sub-system
2 comprises:

3 a laser diode for emitting a laser-beam along a first optical axis;

4 a position-sensitive photodiode, having a major surface and displaced from the
5 first optical axis, for receiving a portion of the laser beam reflected from the object surface
6 and indicating the position of a reflected portion on the major surface.

1 3. (original) The system of claim 2 where the first axis is substantially
2 coincident with the optical axis of the IR optical system so that the laser beam indicates the
3 center of the energy zone.

1 4. (original) The system of claim 1 where the video-subsystem comprises:

2 a digital image generating chip for outputting digital image data, a display
3 device for displaying digital image data, and an image controller chip for controlling the
4 display device to display digital image data provided by the image generating chip;
5 and where the optical overlay subsystem includes:
6 a storage device for storing circle data utilized to form circle images of
7 different diameters;
8 and with the image controller coupled to the storage device and the range-
9 finding sub-system, programmed to select circle data from the storage device for generating
10 a circle having a diameter size determined by the measured distance provided by the range-
11 finding sub-system.

1 5. (original) The system of claim 1 where the shape outline is a circle.

1 6. (currently amended) A method for indicating the location of an energy zone
2 on an object surface, with the energy zone being an area on the object surface that is imaged
3 onto an IR detector by the IR optical system included in a non-contact IR thermal
4 measurement device, said method comprising steps of:
5 acquiring a digital image of the object surface;
6 displaying a digital image of the object, with the digital image including a part
7 of the object surface not included in the energy zone;
8 measuring the distance to the object surface to obtain a distance value;
9 forming a geometrical shape indicating the portion of the object surface
10 indicating the portion of the object surface included in the energy zone with a dimension of
11 the geometrical shape determined by the distance value; and
12 overlays the geometrical shape over the digital image of the object surface
13 to indicate the location of the energy zone.

1 7. (original) The method of claim 6 where the step of forming a geometrical
2 image further comprises the step of:
3 compensating for parallax between the acquired digital image and an optical
4 axis of the IR optical system.

1 8. (currently amended) A system for indicating the location of an energy zone
2 on an object surface, with the energy zone being an area on the object surface that is imaged
3 onto an IR detector by the IR optical system included in a non-contact IR thermal
4 measurement device, said system comprising:
5 means for acquiring a digital image of the object surface;
6 means for displaying a digital image of the object surface, with the digital
7 image including a part of the object surface not included in the energy zone;
8 means for measuring the distance to the object surface to obtain a distance
9 value;
10 means for forming a geometrical shape indicating the portion of the object
11 surface indicating the portion of the object surface included in the energy zone, with the
12 geometrical shape having a dimension determined by the distance value; and
13 means for overlaying the geometrical shape over the digital image of the
14 object surface to indicate the location of the energy zone.

1 9. (original) The system of claim 8 where the means for forming a
2 geometrical image further comprises:
3 means for compensating for parallax between the acquired digital image and
4 an optical axis of the IR optical system.